

Patent Claims

1. Self-adhesive protective film for the exterior of painted vehicles, especially cars, characterized in that
  - the backing of the protective film is a film coated on one side with an adhesive composition
  - whose bond strength on steel is between 0.2 and 2.8 N/cm,
  - the adhesive composition comprising a copolymer of at least two different  $\alpha$ -olefins having 2 to 12 carbon atoms and at least one diene as further comonomer, no  $\alpha$ -olefin having a proportion of 75 mol% or more in the adhesive composition as a whole, and the copolymer having a Mooney viscosity ML (1+4) 125°C of less than 50.
2. Self-adhesive protective film according to Claim 1, characterized in that the proportion of diene in the adhesive composition is between 0.5 and 10% by weight.
3. Self-adhesive protective film according to Claim 1, characterized in that the UV permeability in the range from 290 to 360 nm is less than 1%.
4. Self-adhesive protective film according to Claim 1, characterized in that the copolymer of the adhesive composition has a Mooney viscosity ML (1+4) 125°C of less than 30.
5. Self-adhesive protective film according to Claim 1, characterized in that the adhesive composition is crosslinked.
6. Self-adhesive protective film according to Claim 1, characterized in that the proportion of polar comonomers in the copolymer is less than 20 mol%.
7. Self-adhesive protective film according to Claim 1, characterized in that it comprises at least one light stabilizer.
8. Self-adhesive protective film according to Claim 1, characterized in that it comprises at least one light stabilizer of the HALS class.

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9. Self-adhesive protective film according to Claim 1, characterized in that no more than 65 mol% of any  $\alpha$ -olefin is present in the copolymer.
  10. Self-adhesive protective film according to Claim 1, characterized in that the bond strength on steel is between 0.3 and 1.5 N/cm.
  11. Self-adhesive protective film according to Claim 1, characterized in that the proportion of each  $\alpha$ -olefinic monomer in the copolymer is between 5 and 60 mol%.
  12. Self-adhesive protective film according to Claim 1, characterized in that the UV permeability in the range from 290 to 360 nm is less than 0.1% and the backing film comprises one or more light stabilizers in an amount of at least 0.15% by weight.
  13. Self-adhesive protective film according to Claim 1, characterized in that there is an adhesion promoter between the backing film and the adhesive composition.
  14. Self-adhesive protective film according to Claim 1, characterized in that the force at 10% extension does not exceed 25 N/15 mm width either in the lengthwise or in the transverse direction.
  15. Self-adhesive protective film according to Claim 1, characterized in that the adhesion promoter comprises at least one polymer of which at least 50 mol% consists of one or more  $\alpha$ -olefins.
  16. Self-adhesive protective film according to Claim 1, characterized in that the backing film comprises at least one copolymer of propylene.
  17. Self-adhesive protective film according to Claim 1, characterized in that the adhesive composition and the backing film are joined to the protective film by simultaneous coextrusion.
  18. Use of a protective film according to one of ~~Claims 1 to 17~~ <sup>claim 1</sup> on curved surfaces on the exterior of cars.

